

**Amendments to the Specification**

**On page 6, please replace the paragraph beginning on line 22 with the following paragraph:**

Encircling, annular ribs 42 are provided on the roll-core sleeve 18; they are spaced apart axially and project radially. The inside 40 of the shell 37 is provided with corresponding semi-circular ring grooves 43 which the ribs 42 engage with. Each shell 37 is provided with two ~~ribs 42~~ ring grooves 43. The positive inter-engagement of the ribs 42 and the ring grooves 43 fixes the shells 37 on the roll core 17 in the axial direction i.e., along the axis of rotation 31. For tangentially fixing the shells 37 on the roll core 17 i.e., for fixation in the peripheral direction and for torque transmission, the roll core 17 is provided with externally open holes 44, each of which accommodating a retaining pin 45 which, after being inserted in the hole 44, projects radially from the roll core 17. In the present case, a retaining pin 45 is provided for each shell 37. Consequently, two retaining pins 45 are opposite one another in relation to the axis 15. The inside 40 of each shell 37 is provided with an inwardly open blind hole 46 which a respective retaining pin 45 engages with, retaining the shell 37 in the peripheral direction. The retaining pin 45 thus works as a torque-transmission means, transmitting torque from the roll core 17 to the shells 37. Other than by positive fit, the torque-transmission means can also be produced by frictional engagement between the roll core 17 and the shells 37. In this case, the pin 45 is not necessary. At its front and rear end in the axial direction, each shell 37 comprises slits 47 which are open in the peripheral direction and which blind holes 48 mouth into that extend radially from the outside inwards. The slits 47 are located at the ends of the shell 37 on the peripheral side, in the present case being displaced from one another by 180°. Joining plates

49 are provided, each having two holes 50. For a first shell 37 to be joined to a second shell 37 opposite the first, a plate 49 is inserted halfway into the slit 47 and secured by a pin 51 which is pushed from outside into the blind hole 48. The other half of the plate 49 is inserted into the opposite slit 47 of the other shell 37, where it is equally secured by a pin 51. As seen in Fig. 5, joining two opposed shells 37 takes place at both axial ends of the shell 37 and on both sides so that, as shown in Fig. 5, a total of four plates 49 is needed for the assembly. Flexible elements such as springs (not shown) may be used instead of plates 49; they ensure that the two opposite shells 37 that must be united are pre-loaded one in relation to the other. In this way, there will be no play between the two shells 37 even after prolonged operation, both being pulled towards one another by the spring element.

**On page 9, please replace the paragraph beginning on line 9 with the following paragraph:**

A second exemplary embodiment of the invention is going to be described below, taken in conjunction with Figs. 6 and 7. Constructionally identical parts have the same reference numerals as in the first embodiment, the description of which is referred to. Parts that differ constructionally, but are functionally identical have the same reference numerals with an "[a]" "a" annexed. The substantial difference from the first embodiment resides in that, as opposed to the first embodiment, the ribs 42a do not encircle entirely, but have discontinuities 52 on two opposite sides where no rib 42a is disposed. The ribs 42a therefore consist of two sections 55, 56 which are not connected with one another and have an angle at center of less than 180°, in particular approximately 170°. Correspondingly, ring groove sections 53 of an angle at center of less than 90° are provided on the inside 40 of the shell 37a. A rib 54, which projects towards the

bottom of the grooves 53, remains between two ring-groove sections 53 that are located on the same periphery. The discontinued ribs 42a engage with the ring-groove sections 53. This applies in particular to the remaining rib 54 which engages with the discontinuity of the rib 42a. Tangential fixing of each shell 37a is obtained in this way so that torque transmission is possible from the roll core 17a to the brush sleeve 38a. As opposed to the first embodiment, retaining pins 45 are not necessary. Replacement of the brush sleeve 38a takes place as in the first embodiment.

**On page 10, please replace the paragraph beginning on line 1 with the following paragraph:**

A third exemplary embodiment of the invention is going to be described below, taken in conjunction with Fig. 8. Constructionally identical parts have the same reference numerals as in the first embodiment, the description of which is referred to. Parts that differ constructionally, but are functionally identical have the same reference numerals with a "[b]" annexed. As in the first embodiment, two 180°-shells 37b are provided on a level of ~~the roll~~ the brush roll 16; they envelop the roll core 17 entirely. As in the first embodiment, the bunch of bristles 41 projects normally radially from the axis 15. Unlike the first embodiment, two associated shells do not abut along a straight parallel gap 58. Rather, provision is made for a meandering, serpentine or zigzagging gap 58b. The faces 59, 60 of the shells 37b which define the gap 58b are such that they interengage alternately or in the way of fingers. The bunches of bristles 61 and 62, which are disposed in the vicinity of the faces 59, 60, are located in the vicinity of the respective projections 63 and 64 of the faces 59 and 60. In this way, the distance between directly adjacent bunches of bristles 61 and 62 of various shells 37b is reduced upon assembly of the shells 37b so that the bunches of bristles 61 and 62 cover the gap 58b as

perfectly as possible and, upon rotation of the brush roll 16, provide for as uniform as possible a supporting behaviour of the web of corrugated board 1. Consequently, as for the support of the web of corrugated board 1, it is considerably less important whether the bunch of bristles 41 is located somewhere on the surface of the shell 37b or in proximity to the gap 58b. In particular, each projection 63 and 64 is allocated its proper bunch of bristles 61 and 62 which is located at least in part on the projection. This means that the edge of the bunch of bristles 61 that is turned towards the face 59 projects from the adjacent setbacks of the same face 59. By placing the bunch of bristles 61 at least in part on the projection 63, the distance from the two defining bunches of bristles 62 of the adjoining shell can be minimized; a constant minimum distance of the edge from the face 59 can be kept so that fixing the bunch of bristles 61 to the backing is not impeded.

**On page 11, please replace the paragraph beginning on line 5 with the following paragraph:**

A fourth exemplary embodiment of the invention is going to be described below, taken in conjunction with Figs. 9 to 12. Constructionally identical parts have the same reference numerals as in the first embodiment, the description of which is referred to. Parts that differ constructionally, but are functionally identical have the same reference numerals with a [[c]] "e" annexed. The difference from the first embodiment resides in that the bunches of bristles 61c and 62c which adjoin the gap 58 between the two half shells 37c do not extend radially outwards in relation to the axis 15, but incline by an angle  $b$  towards the gap 58, with  $1^\circ \leq b \leq 15^\circ$ , in particular  $2^\circ \leq b \leq 10^\circ$ , and in particular  $b \approx 5^\circ$  applying. The bristles that adjoin the bunches of bristles 61c and 62c can incline towards the gap 58 too. The inclined arrangement described

above can apply to the entire bunches of bristles as well as to individual bristles. The resultant advantage consists in improved cover of the gap 58 as in the third embodiment, the function of the brush roll 16 thus being equally perfect at any point of the periphery.

**On page 11, please replace the paragraph beginning on line 27 with the following paragraph:**

A fifth exemplary embodiment of the invention is going to be described below, taken in conjunction with Figs. 13 to 15. Constructionally identical parts have the same reference numerals as in the first embodiment, the description of which is referred to. Parts that differ constructionally, but are functionally identical have the same reference numerals with a [[d]] "d" annexed. The substantial difference from the first embodiment resides in the way how the shells 37d are fixed to the roll core 17d. As in the first embodiment, the roll core 17d comprises radially projecting annular ribs 42d which engage with associated ring grooves 43d in the half shells 37d, in this way fixing the half shells 37d in the axial direction. The axial edges 67 of the ring grooves 43d are skewed so that removal of the ~~plastic part~~ plastic shell 37d from a mold is facilitated. However, it is fundamentally possible to provide edges 67 which are perpendicular to the axis 15. A corresponding setback in the form of a ring groove 68 is provided between two annular ribs 42d on the roll core 17d. This setback comprises two holes 44d which are disposed on diametrically opposed sides and into which [[the]] pins 45d are inserted for example by press fit or screwing. The two faces 59, 60 of each half shell 37d centrally comprise a half blind hole which is externally open halfway. The half blind holes 46d of two adjacent shells 37d enclose the pin 45d when assembled. A hole 69 is provided centrally between two axially level, opposite pins 45d i.e., displaced by 90° in relation thereto. A threaded insert 70 is screwed into this hole

69; it has an external thread as well as an internal thread. The threaded insert 70 is a standard component. It has spikes 71 which project radially outwards and which, after the threaded insert 70 has been screwed completely into the hole 69, are driven in a direction towards the axis 15. The spikes 71 destroy a part of the internal thread, located in the hole 69, of the aluminum roll core 17d, whereby the threaded insert 70 is permanently fixed in the hole 69. Centrally between the faces 59 and 60 and also centrally in the axial direction, each shell 37d has a through hole 72. The hole 72 has an internal thread 73, for example of the type M12. It is of essential importance that the pitch of the internal thread 74 inside the threaded insert 70 exceeds the pitch of the thread 73 inside the half shell [[73d]] 37d. A threaded pin 75 is provided, which fits the two threads 73, 74 and has an external thread portion 76 that fits the thread 73 as well as internal thread portion 77 of ~~smaller~~ larger diameter that fits the internal thread 74.

**On page 13, please replace the paragraph beginning on line 12 with the following paragraph:**

The assembly of the shells 37d will be described below. At first the pins 45d are secured in the associated holes 44d. Then the threaded pin 75 is screwed by the external thread portion 76 into the hole 72 in the shell 37d until it stops. Then the half shell 37d is placed on the roll core [[18d]] 17d, the pins 45d engaging with the halfway open blind holes 46d and fixing the shells 37d in a certain position on the core [[18d]] 17d. Afterwards the threaded pin [[45]] 75, the outer end of which has a hexagon socket, is screwed from outside through the hole 72 with the internal thread portion 77 into the internal thread 74 of the threaded insert 70 by an associated implement. With the pitch of the internal thread 74 inside the threaded insert 70 exceeding the pitch of the thread 73 inside the shell 37d, the threaded pin 75 is driven per revolution faster into

the roll core 17d than it is screwed out of the shell 37d. In this way the shell 37d is fastened on the roll core 17d. So as to ensure that the threaded pin 75 is driven into a sufficient number of flights in the threaded insert 70, a gap must remain in the radial direction in the vicinity of the two holes 69 and 72 when the half shell 37d is placed on the roll core ~~[[18d]]~~ 17d. This gap is closed when the threaded pin 75 is screwed in. Disassembly of the shell 37d is correspondingly simple.